

Initiative to Revise EPA's Pesticide Ecological Assessment Process

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Abstract

In 1997, the Environmental Fate & Effects Division in the Office of Pesticide Programs began an initiative to identify, develop, and validate tools and methodologies to conduct probabilistic assessments. The purpose of this initiative is to strengthen the core elements of the ecological assessment process under the FIFRA regulatory framework. This initiative has two phases.

Phase I focuses on the technical development of potential tools and methodologies and is being conducted by the aquatic and terrestrial workgroups of ECOFRAM, the Ecological Committee on FIFRA Risk Assessment Methods. ECOFRAM is comprised of experts drawn from government agencies, academia, contract laboratories, environmental advocacy groups, and industry, who have been working on developing proposed tools and methods. Phase I is nearing completion, and ECOFRAM plans to have their final reports completed in Summer, 1999.

Phase II will focus on using the results of ECOFRAM to develop an implementation plan for probabilistic ecological assessments in OPP. This will be the primary task of an Implementation Team that will be formed within OPP. They will:

- (1) Prepare a technical report based on their review of ECOFRAM's proposals;
- (2) Develop options for integrating probabilistic tools and methods into OPP's ecological assessment process;
- (3) Identify and coordinate additional developmental work, research, and validation;
- (4) Organize peer reviews;
- (5) Develop training; and
- (6) Continue outreach and dialogue with stakeholders outside OPP.

Phase I: Technical Development of Probabilistic Tools and Methods

May 1996: SAP Meeting

The Environmental Fate and Effects Division (EFED) within the Office of Pesticide Programs (OPP) presented their ecological assessment methodology to the FIFRA Scientific Advisory Panel (SAP) and asked for comments and recommendations on how this office could improve these methods and procedures.

SAP Recommendations

While recognizing and generally reaffirming the utility of OPP's current ecological assessment process, the SAP indicated:

- OPP should move beyond single point deterministic assessments and
- Develop the tools and methodologies necessary to do a probabilistic assessment of risk.

EFED's Response to the SAP

- Supported the SAP's comments and recommendations
- Proposed to develop an initiative to strengthen the core elements of the ecological assessment process

Goals of Initiative

- Identify and develop tools and methodologies to conduct probabilistic assessments for predicting the magnitude and probability of adverse effects
- Maintain a solid scientific foundation throughout initiative
- Conduct the initiative within the context of the FIFRA regulatory framework
- Maintain an open and transparent process with stakeholders

June 1997: ECOFRAM Formed

Recognizing the importance of involving stakeholders in redesigning its ecological assessment process, OPP initiated several channels for external involvement, including the American Crop Protection Association (ACPA), Pesticide Program Dialogue Committee (PPDC), and others. This led to a joint planning committee with ACPA, which formed the Ecological Committee on FIFRA Risk Assessment Methods (ECOFRAM) to begin work on this initiative. In addition, a public workshop was held as a kick-off.

ECOFRAM is divided into Aquatic and Terrestrial Workgroups, which have been working on developing probabilistic tools and methods. They are comprised of scientific experts with broad representation of stakeholders, such as academia, environmental groups, state agencies, industry, and others.

Charge to ECOFRAM

ECOFRAM was formed to support and carry out the goals of the initiative, including developing probabilistic tools and methods, maintaining a solid scientific foundation, working within the FIFRA regulatory framework, and maintaining an open process with stakeholders. In addition, they also were asked to

- Address uncertainty, limitations, and assumptions;
- Provide rationale supporting recommendations;
- Identify data gaps; and
- Identify areas that need to be developed as well as research and validation needs.

Because of the immense scope, they were asked to begin by

- (1) Addressing increasing levels of biological organization, focusing on individuals, populations, and communities; and
- (2) Direct acute and chronic effects on terrestrial vertebrates, aquatic vertebrates, and aquatic invertebrates.

November 1998

OPP and ECOFRAM members have:

- Held approximately 12 meetings over the past 18 months to discuss potential tools and methodologies;
- Presented papers on their progress during professional meetings within the US and Europe, such as the Society for Risk Analysis, SETAC, American Chemical Society, SETAC Europe, and others;
- Updated the PPDC and State FIFRA Issues Research and Evaluation Group (SFIREG);
- Consulted with the SAP regarding the progress being made;
- Maintained the home page
www.epa.gov/oppefed1/ecorisk/index.htm
- Updated their own organizations; and
- Begun drafting chapters of reports that will present their findings and conclusions.

Steps to Complete Phase I

- Incorporate comments from November SETAC meeting into draft reports
- Complete ECOFRAM draft reports (February 1999)
- Hold Peer Input Workshop, in which ECOFRAM members, selected scientists, and the public are invited to provide comments on draft reports and provide responses to specific questions (June 1999)
- Incorporate comments from workshop
- Complete final ECOFRAM reports

Timeline

Draft reports	Spring 1999
Peer input workshop	June 1999
Final reports - End of Phase I	Late summer 1999